

# ‘Cryptocurrency – The fallacy of new age Monetary System’

Benjamin Jones Abraham<sup>1,2</sup> & Dr. K. Ramamurthi<sup>3</sup>

<sup>1</sup>Research Scholar, Bharathiar University

<sup>2</sup>Assistant Professor, Department of Commerce & Management, Christ Academy Institute for Advanced Studies, Bangalore

<sup>3</sup>Principal, Coimbatore Institute of Management & Technology, Vellimalaipattinam, Narsipuram, Coimbatore.

## 1.1 Abstract

With the enormous global rise in computer and Internet based commercial activities so has the need for computer and Internet based currency system. The advancement in digital mining and cryptography has evolved to what is now popularly known as Cryptocurrency.

Matter of fact, cryptocurrencies are neither issued by any country nor by any International banking authority. They are decentralised, non regulated and are not backed by any asset. Which means that trading on them is completely speculative in nature.

It is these characteristics of cryptocurrency that set them as the biggest threat to International monetary system. On one side, it is true that cryptocurrencies are a true sign of achievement in digital payment system, however on the other side, they might just turn out to be one of the biggest financial fraud of all time.

Many believed it to be the new gold and some compared the surge in value to tulip rush. In any case the value of Bitcoin and other cryptocurrencies such as Litecoin or Ether have witnessed an economic bubble, where the value of the asset has increased without much fundamental appreciation.

In this paper titled ‘*Cryptocurrency – The fallacy of new age Monetary System*’, the author tries to analyse the fallacy of cryptocurrency as global payment system.

**Keywords:** *Monetary System, Cryptocurrency*

## 1.2 Introduction to Cryptocurrency

Cryptography is the technology of sending secure message over insecure networks. Cryptography is the process where messages sent over the networks are hashed, these hashed messages are encrypted using the sender’s and receiver’s public key and send over the network, in some cases after the sender has digitally signed the document.

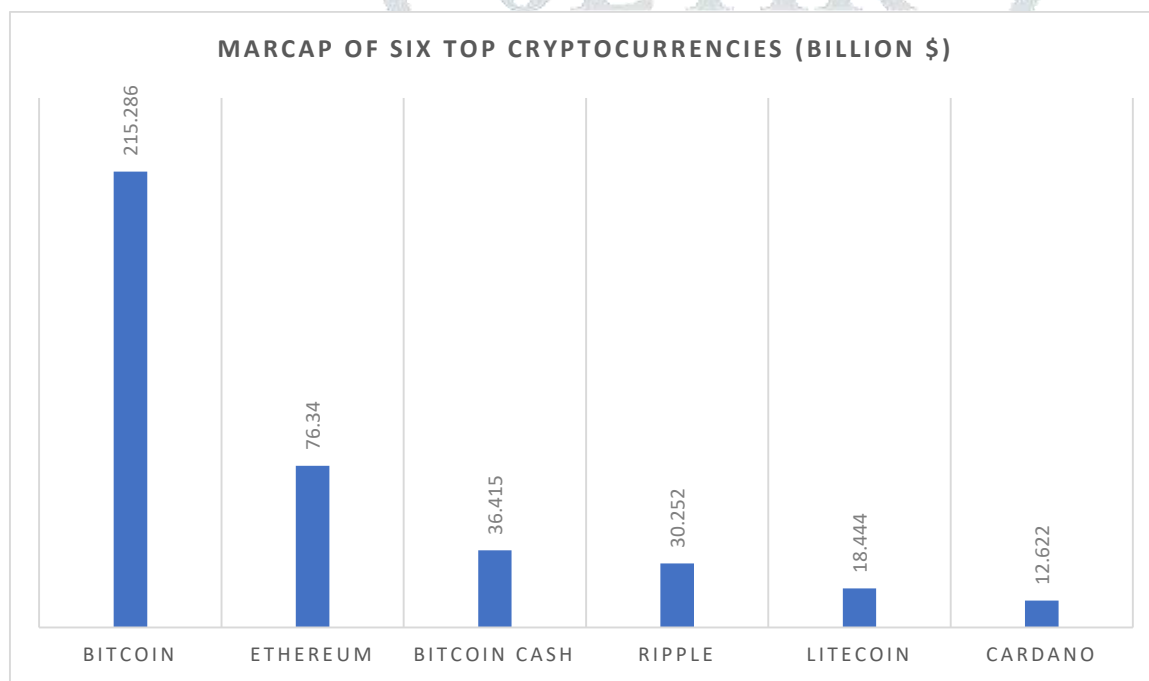
Cryptocurrencies are computer generated codes, working on the principle of peer – to – peer electronic cash system. Cryptocurrencies are virtual currencies and works on the principle of limited entries in the database that is impossible to change, unless the specified conditions are met.

Cryptocurrency maintains a record of every transaction that occurred and it is made available to everyone within the network. This reduces the possibility of double entry, a problem that beleaguered by the traditional banking system. Cryptocurrency thus works on the principle of a Blockchain technology that maintains a public ledger.

Cryptocurrencies are so called because of their high level of security enhanced by strong cryptographic coding. New coins are added into the networks if miners are able to solve compute based puzzle. The miners make the transaction legitimate, after that the transaction is added to the network, which then is added to the database by each node in the network, beyond this stage a transaction is unforgeable and irreversible.

### **1.3 The emergence of Cryptocurrency**

The year 2017 saw the rhapsody of the cryptocurrency market. Bitcoin, the leader of the lot grew approximately by 1700%, while most stock exchanges grew by 15 -18 percentage at its highest. As of 2017, there were twenty nine cryptocurrencies that possess a market capitalisation of more than a Billion USD.



*Fig1: Market Capitalisation of top six cryptocurrencies as of December 2017.*

*Source : Business insider*

### **Timeline of Bitcoin**

2008: A white paper on cryptocurrency is introduced by Satoshi Nakamoto

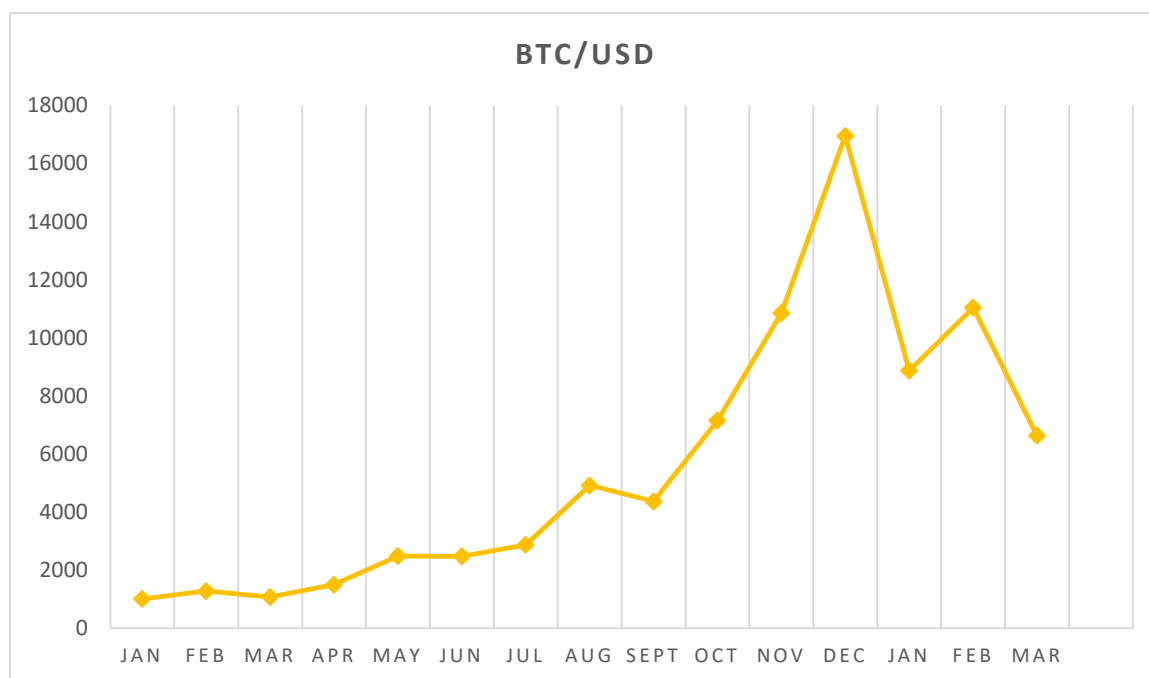
2009: The first bitcoin transaction takes place. In the same year, the Bitcoin exchange rate was determined, with 1309.03 BTC to 1 USD.

2010: The first real world transaction on Bitcoin happens as 10000 BTC is paid to buy two pizzas from Pap John

2011: The market capitalization exceeds a Billion

2017: Over thousand different cryptocurrencies are available in the market

2017: As more and more merchants are willing to accept payments in Bitcoins, the prices shoot up.



***Fig2: BTC/ USD – Jan 2017 to March 2018***

***Source : Yahoo Finance***

#### **1.4 The predicament of Cryptocurrency displacing the existing International Monetary System**

Many analysts believe that the exorbitant progress of cryptocurrencies indicate the fact that as with other facets of life where technology has disrupted the existing system of functioning, the growth of cryptocurrency is assumed to be a disruptive technology replacing the traditional form of International Monetary System.

The International Monetary System (IMS) is a set of generally accepted rules regarding international trade, payments and investments. IMS is the global network between countries that determine the exchange rate of each currency. The IMS encourages countries to participate in international trade for regional progress.

The trade between countries requires a commonly accepted international payment system.

For five thousand years mankind cossetted with his obsession with gold, be it gold being used as a monetary value or it being used to chisel deities in temples or it being used as an ornament. Man's fascination for gold has not weaned over the centuries.

Around 700 BC gold coins were used as monetary value for the first time. By 1696, the Gold standard was established. However extensive demand for gold led to its shortage . By the 18<sup>th</sup> century silver resources were found in large quantities and silver too became part of the monetary system. Thus by 1792, both gold and silver were simultaneously used as the Gold standard of monetary system gave way to Bimetallism. However the disparity between the two metals forced gold to be out of circulation due to the Gresham Law. As silver steadily lost in value most countries contemplated reverting back to the gold standard. By 1821, the United Kingdom became the first country to officially revert back to the gold standard. From 1871 until the outbreak of the First World War in 1914, gold was at its pinnacle of being the reserve currency and asset of the world. This period also saw the rise of Brittan as super power as it had its colonies across the globe, thus the British pound was used as reserve currency.

The period just before and after the First World War saw the declining impact of the gold. Counties moved to currency system with floating exchange rate system. The period also witnessed the United States displace the United Kingdom as the power house of world economy, however they were reluctant to take the leadership role , rather choosing to focus on domestic concerns. The enormous systematic damages and war repatriations of the fist world war resulted in the sluggish economic growth of the European world. The massive war repatriation of the war on Germany by France and Britain, the increasing trade barrier between Europe and America and the American immutable stand to not waive war debts caused economic panic around the western world. In 1929, the American economy was hit by its major economic catastrophe, the Great Depression. By 1939, the world edged towards its next war, with each country getting into the war for varied reason.

In July 1944, at the backdrop of the Second World War, the world leaders met in New Hampshire to chart a plan for an International Monetary system. Under this agreement, known as the Brettonwoods Agreement, US Dollar was pegged with gold at \$ 35 / Oz. This marked the beginning of US Dollar as the reserve currency of the world. The IMF, the World Bank and the Bank for International Settlement were organised to make the international banking facilities more prominent. By 1971, the Bretton Woods collapsed and by 1973 all the countries moved to fiat currency regime engaging in floating exchange rate system. However, neither the fiat currency system nor the floating exchange system is fool proof. Fiat currency system is debt laden system. The massive amount of currencies printed by the sovereign governments is not above the suspension of collapsing one day.

Date	System	Reserve Asset	Leaders
1803 - 1873	Bimetallism	Gold, Silver	France, UK
1873 - 1914	Gold Standard	Gold , Pound	UK
1914 - 1924	Anchored Gold Standard	Gold , Dollar	US UK France
1924 - 1944	Gold Standard	Gold, Dollar, Pound	US, UK, France
1944 - 1971	Bretton Woods	Dollar, Gold	US
1971 -	Flexible Exchange Rates	Dollar	US

*Table:1 – Timeline of International Monetary System*

From the mid-1990s with the exploration of computers connected with each other by networks and the commencement of the World Wide Web pioneered by Tim Berners Lee and his team, Internet became a sensation for conducting online business. The world waits for another type of payment standard. digital payment systems have brought innovative options on board.

In the last 45 years, technologies such as SWIFT (Society for World Wide Interbank Financial Transaction), have been developed for fast and easy transfer of money between countries. The dotcom bubble made almost all the leading banks make their presence in the online space. Thus easy transfer of money between banks, payment of utility bills, and access of ones and account statement were made possible from remote areas.

As the world makes faster pace in application of Artificial Intelligence and computer based payment systems in all facets of life, International Monetary system wouldn't be unfazed either. Existing International Monetary System of reserve currency founded on fiat currency could well be displaced by cryptocurrencies that removes the hassles of one country holding pole position in the race of international trade since their currency is used as reserve currency.

### 1.5 Fiat Currencies Vs Cryptocurrency

The currency system that is used by all the countries now is the fiat currency system. This gives the central banks the liberty to print currencies without the backing of a commodity asset such as gold. Remember, currencies were first issued as legal tender on the amount of gold that was present in the vault, which means that any holder of a currency could exchange his currency that from the bank with gold. It is because of this behaviour of fiat currency that they are called paper currency. Fiat currencies have created load of problems of its own in the form of inflation. Central banks could manoeuvre with the monetary policies for expansionary or deflationary purposes. It is at this juncture that the relevance of cryptocurrency is vital.

Cryptocurrencies as of now cannot be issued by anyone unless certain computer generated criteria are fulfilled, therefore it assumes that the question of inflation or excess currency supply never arise.



## **1.6 Cryptocurrency – Pros & Cons**

### **Pros:**

- a. Cryptocurrency transactions are transparent: Cryptocurrencies such as Bitcoin follow an open ledger system called the Blockchain. This makes all the transactions available for viewing and verification for all the parties involved, thus, the possibility of manipulating the ledger is an impossible proposition. To revert or alter transaction is implausible.
- b. Inflation Unlikely: Because every coin is mined only after a certain task is accomplished. Currency / coins in the cryptographic world cannot be mined just the way it is done in the world of fiat currency.
- c. Portability: Since it is digital currency, Large amount of currency can be carried in memory drive.
- d. Owners may remain anonymous; Cryptocurrency holders are no required to provide their personal details such as KYC with the banks. An owner of currency may remain anonymous if he desires so.
- e. Quick and fast Payments: Payments are made between accounts within a few seconds. Transfer of funds between holders don't require the cumbersome effort of feeding data as with the case of credit bank payments.

### **Cons:**

- a. Lives in a highly volatile market. Cryptocurrencies experience higher risk than other financial risk. In 2017, the cryptocurrency grew by..., but from December 2017 to February 2018, the cryptocurrencies fell by:
- b. Uncertainty: In spite of their surging market capitalization and increasing number of cryptocurrencies available in the market, the cryptocurrencies are yet to be authorized as legal payment systems by any central bank or international banking system. Thus there is uncertainty hovering their future.
- c. Lack of Security: Of the total forty web based business that offered to exchange the Bitcoins of owners to fiat currencies, eighteen of them have gone out of business.
- d. Scaling
- e. It is not possible to reverse payment

## **Paper Currency – Why it is desirable to replace the existing Monetary system**

A scholastic view of replacing the existing paper currency system might work in favour of cryptocurrencies. Because, all though paper currencies have successfully displaced the barter system and the gold standard, the flaws of the existing monetary system cannot be ignored for too long from economic point of view.

The origin of paper currency dates back to 740 BC in China when the Tang Dynasty issued paper currency, printed from methodology of block printing. The principal of issuing paper backed currencies found its way into Europe in the 14<sup>th</sup> century.

In 1694, The Bank of England issued handwritten notes, that could be redeemed with gold or silver coinage. During this period, paper currencies were issued by the commercial banks which were legally entitled to be redeemed by gold or silver or any other commodity with which it was backed. However, with passage of time, the philosophy of issuing currency changed. The issuing authority fully vested with the Central banks. According to the substance of the modern monetary thinking, currency should be printed in accordance to the need or demand of the public and not by the amount reserve in the form of gold or silver. Thus it became impossible to issue currency that are fully backed by gold or silver. Paper currency today is IOU or Promissory notes.

Today's paper notes are issued by the Central banks and guaranteed by the government. As most countries adopt fiat currency, it gives the power to central bank to print money more than its actual worth. Central banks employ Fiscal and Monetary policies to expand or regulate the economy. During an expansionary period, central banks reduces the interest rates to increase the supply of money into the economy by a methodology called Quantitative Easing. Central bank buys government bonds to increase the supply of money, this however lowers the interest rates to zero, which might leave its possible repercussions on the debt market of that country. An increased money supply increases the inflation. To curb this inflation, interest rate have to be brought up, which eventually sojourn economic progress. An increase in the money supply of a country in all likelihood depreciates the value of that currency.

Many snags of paper currency has warranted for replacing he existing monetary system.

The disadvantages of Paper currency can be listed as:

- a. Inflation as a result of deficit budgeting
- b. Demonetization
- c. Fluctuations in exchange rate
- d. Counterfeit
- e. Wears Out: Soiled cash, damages. Inflation is another reason.

### **Conclusion**

The future of monetary system can be envisaged as the intersection of paper currency and cryptocurrency. Both the systems have its flaws and its fairness. While paper currency has the backing of central banks and governments, cryptocurrencies are yet to find favour with central banks and governments. But in the world of cyber business, the centrals banks and government matter little. One of the major reasons for the growth of cryptocurrencies is that it has been accepted as a payment by merchants and vendors despite the governmental apprehensions rather than approval. In such a scenario cryptocurrency could lead to unified global parallel economy. Cryptocurrencies with the backing of government and central bank could one day advent the dawn of newer monetary system, until then cryptocurrencies would amaze us as the biggest Ponzi scheme.

## References

Androulaki, E., Karame, G.O., Roeschlin, M., Scherer, T. and Capkun, S., 2013. Evaluating user privacy in bitcoin. In *Financial Cryptography and Data Security* (pp. 34-51). Springer Berlin Heidelberg.

Blockchain.info. (n.d.). *Bitcoin Number Of transactions Per Day*. [online] Available at: <https://blockchain.info/charts/n-transactions> [Accessed 24 April. 2018]

Bohr, J., and Bashir, M. 2014. “Who Uses Bitcoin? An exploration of the Bitcoin community,” in 2014

Bollen, R. 2013. “The legal status of online currencies: Are Bitcoins the future?” *Journal of Banking and Finance Law and Practice*

Grinberg, R., 2012. Bitcoin: an innovative alternative digital currency. *Hastings Sci. & Tech. LJ*, 4, p.159.

*State of Bitcoin 2015: Ecosystem Grows Despite Price Decline*. [online] Available at: <http://www.coindesk.com/state-bitcoin-2015-ecosystem-grows-despite-price-decline/> [Accessed 25 April 2018]

Reid, F. and Harrigan, M., 2013. An analysis of anonymity in the bitcoin system (pp. 197-223). Springer New York.

White, L. (2015). *The Market for Cryptocurrencies*. *SSRN Electronic Journal*.

